٠,

### JEEE HOME | SEARCH IEEE | SHOP | WEB ACCOUNT | CONTACT IEEE

Membership Public	ations/Services Standards Conferences Careers/Jobs
IEEE	Welcome United States Patent and Trademark Of
Help FAQ Terms IE Review	EE Peer Quick Links ▼
Welcome to IEEE Xplore  - Home - What Can I Access? - Log-out	Your search matched <b>11</b> of <b>981247</b> documents.  A maximum of <b>11</b> results are displayed, <b>25</b> to a page, sorted by <b>Relevance</b> in <b>descending</b> order. You may refine your search by editing the current search expression or entering a new one the text b. Then click <b>Search Again</b> .  Iempel-ziv and search
Tables of Contents  Journals & Magazines  Conference Proceedings  Standards	Search Again  Results: Journal or Magazine = JNL Conference = CNF Standard = STD  1 Generalized Lempel-Ziv parsing scheme and its preliminary analysis (
Search  O- By Author O- Basic O- Advanced	average profile  Louchard, G.; Szpankowski, W.;  Data Compression Conference, 1995. DCC '95. Proceedings, 28-30 March 19  Page(s): 262-271
Member Services  - Join IEEE - Establish IEEE - Web Account	[Abstract] [PDF Full-Text (424 KB)] IEEE CNF  2 Asymptotic behavior of the Lempel-Ziv parsing scheme and digital tre  Jacquet, P.; Szpankowski, W.;  Information Theory, 1995, Proceedings, 1995, IEEE International Companies
O- Access the IEEE Member Digital Library	Information Theory, 1995. Proceedings., 1995 IEEE International Symposium (17-22 Sept. 1995 Page(s): 14  [Abstract] [PDF Full-Text (96 KB)] IEEE CNF

# 3 On the average redundancy rate of the Lempel-Ziv code with k-error protocol

Reznik, Y.A.; Szpankowski, W.;

Data Compression Conference, 2000. Proceedings. DCC 2000 , 28-30 March 20 Page(s): 373-382

### [Abstract] [PDF Full-Text (100 KB)] IEEE CNF

### 4 Data compressor decompressor IC

Shah, I.A.; Johnson, B.C.;

Circuits and Systems, 1990., IEEE International Symposium on , 1-3 May 1990 Page(s): 41 -44 vol.1

V

### [Abstract] [PDF Full-Text (276 KB)] **IEEE CNF**

# 5 Average profile and limiting distribution for a phrase size in the Lemp parsing algorithm

Louchard, G.; Szpankowski, W.;

Information Theory, IEEE Transactions on , Volume: 41 Issue: 2 , March 1995

Page(s): 478 -488

### [Abstract] [PDF Full-Text (836 KB)] IEEE JNL

### 6 Fixed-slope universal lossy data compression

En-hui Yang; Zhen Zhang; Berger, T.;

Information Theory, IEEE Transactions on , Volume: 43 Issue: 5 , Sept. 1997

Page(s): 1465 -1476

### [Abstract] [PDF Full-Text (628 KB)] IEEE JNL

### 7 A pattern matching approach to image compression

Atallah, M.J.; Szpankowski, W.; Genin, Y.;

Image Processing, 1996. Proceedings., International Conference on , Volume: :

16-19 Sept. 1996

Page(s): 349 -352 vol.2

### [Abstract] [PDF Full-Text (668 KB)] IEEE CNF

### 8 Pattern matching image compression

Atallah, M.; Genin, Y.; Szpankowski, W.;

Data Compression Conference, 1996. DCC '96. Proceedings , 31 March-3 April

Page(s): 421

### [Abstract] [PDF Full-Text (60 KB)] IEEE CNF

### 9 Pattern matching image compression: algorithmic and empirical resu

Atallah, M.; Genin, Y.; Szpankowski, W.;

Pattern Analysis and Machine Intelligence, IEEE Transactions on , Volume: 21 I

, July 1999

Page(s): 614 -627

### [Abstract] [PDF Full-Text (1168 KB)] IEEE JNL

### 10 Average profile of the Lempel-Ziv scheme for a Markovian source

Jing Tang; Szpanskowski, W.;

Information Theory. 1997. Proceedings., 1997 IEEE International Symposium (

۲,



June-4 July 1997 Page(s): 311

### [Abstract] [PDF Full-Text (92 KB)] IEEE CNF

### 11 Software compression in the client/server environment

Factor, M.; Sheinwald, D.; Yassour, B.-A.;

Data Compression Conference, 2001. Proceedings. DCC 2001., 27-29 March 2

Page(s): 233 -242

### [Abstract] [PDF Full-Text (504 KB)] IEEE CNF

Home | Log-out | Journals | Conference Proceedings | Standards | Search by Author | Basic Search | Advanced Search | Join IEEE | Web Account | New this week | OPAC Linking Information | Your Feedback | Technical Support | Email Alerting | No Robots Please | Release Notes | IEEE Online Publications | Help | FAQ | Terms | Back to Top

Copyright © 2003 IEEE — All rights reserved

JEEE HOME | SEARCH IEEE | SHOP | WEB ACCOUNT | CONTACT IEEE

Membership Publica	XDIORE® RELEASE 1.5	ers/Jobs ·  Welcome  United States Patent and Trademark Of
<u>Help FAQ Terms IE</u> <u>Review</u>	EE Peer Quick Links V	> A
O- Home O- What Can I Access?	SEARCH RESULTS [PDF Full-Text (276 KB)]	PREVIOUS NEXT DOWNLOAD CITA
Tables of Contents  - Journals & Magazines - Conference Proceedings - Standards  - Standards  - By Author  Data compressor decomp  Shah, I.A. Johnson, B.C.  North American Philips Corp., Briarcliff of This paper appears in: Circuits and Sy Symposium on  Meeting Date: 05/01/1990 -05/03/1990  Publication Date: 1-3 May 1990  Location: New Orleans, LA, USA On page(s): 41-44 vol.1  References Cited: 3  INSPEC Accession Number: 3832467	Manor, NY ; stems, 1990., IEEE International	
Abstract: The data compressor decompressor (DCD) IC, a VLSI implement of the Lempel-Ziv (L-Z) compression algorithm, is discussed. The high-speed, lossless compression of digital data such as text and single-pass lossless compression scheme adapts to the statistics processed. The authors outline the L-Z compression method, illustrated its search requirement, and discuss the chip architecture and features.		
O- Access the IEEE Member Digital Library	Index Terms:  VLSI data compression picture processing method Lempel-Ziv compression algorithm decompressor images lossless compression scheme text	VLSI chip architecture data compressor
	Documents that cite this document Select link to view other documents in t	he database that cite this one.

SEARCH RESULTS [PDF Full-Text (276 KB)] PREVIOUS NEXT DOWNLOAD CITATION

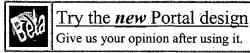
Home | Log-out | Journals | Conference Proceedings | Standards | Search by Author | Basic Search | Advanc Join IEEE | Web Account | New this week | OPAC Linking Information | Your Feedback | Technical Support | Er No Robots Please | Release Notes | IEEE Online Publications | Help | FAQ | Terms | Back to Top





> home : > about : > feedback :

US Patent & Trademark Office



Search Results

Search Results for: [(((compress or compact or encode) < near/2 > data) < paragraph > (field or column or attribution)) and (decompress or decode) and ((compress or encode or compact) <sentence> search) ]

Found 28 of 122,783 searched.

Search within Results

> Advanced Search

> Search Help/Tips

Sort by: Title Publication Publication Date Score Binder

Results 1 - 20 of 28 short listing

Profile-guided code compression

100%

Saumya Debray, William Evans

ACM SIGPLAN Notices, Proceedings of the ACM SIGPLAN 2002 Conference on Programming language design and implementation May 2002

Volume 37 Issue 5

As computers are increasingly used in contexts where the amount of available memory is limited, it becomes important to devise techniques that reduce the memory footprint of application programs while leaving them in an executable form. This paper describes an approach to applying data compression techniques to reduce the size of infrequently executed portions of a program. The compressed code is decompressed dynamically (via software) if needed, prior to execution. The use of data compression t ...

Query optimization in compressed database systems

100%

Zhiyuan Chen, Johannes Gehrke, Flip Korn

ACM SIGMOD Record, Proceedings of the 2001 ACM SIGMOD international conference on Management of data May 2001

Volume 30 Issue 2

Over the last decades, improvements in CPU speed have outpaced improvements in main memory and disk access rates by orders of magnitude, enabling the use of data compression techniques to improve the performance of database systems. Previous work describes the benefits of compression for numerical attributes, where data is stored in compressed format on disk. Despite the abundance of string-valued attributes in relational schemas there is little



work on compression for string attributes in a ...

Tool support for architectural decisions in embedded systems: CoCo: a hardware/software platform for rapid prototyping of code compression technologies

100%

Haris Lekatsas, Jörg Henkel, Srimat Chakradhar, Venkata Jakkula, Murugan Sankaradass Proceedings of the 40th conference on Design automation June 2003

In recent years instruction code compression/decompression technologies have emerged as an efficient way to a) reduce the memory usage of an embedded system, b) to improve performance through effectively higher bandwidths and/or to c) reduce the overall power consumption of a system processing compressed code. We have presented efficient code compression/decompression techniques and architectures in the past. For the commercialization phase, we designed a novel hardware/software code compression ...

Parallel algorithms for data compression

100%

M. E. Gonzalez Smith, J. A. Storer

Journal of the ACM (JACM) April 1985

Volume 32 Issue 2

Parallel algorithms for data compression by textual substitution that are suitable for VLSI implementation are studied. Both "static" and "dynamic" dictionary schemes are considered.

SAMC - efficient semi-adaptive data compression

100%



Edward Hatton

Proceedings of the 1995 conference of the Centre for Advanced Studies on Collaborative research November 1995

Universal noiseless coding is of considerable interest to industry for the purposes of data reduction in order to store or transmit large volumes of typically textual data. Compression schemes have evolved from simple memoryless Huffman coding, to the Lempel-Ziv family of dictionary compression, to the current Markov or statistical modelling. This evolution has resulted in successively better compression, at an increased cost of execution time and RAM requirements. Bell, Cleary, and Moffat's Mar ...

Data compression

99%



Debra A. Lelewer, Daniel S. Hirschberg

ACM Computing Surveys (CSUR) September 1987

Volume 19 Issue 3

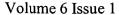
This paper surveys a variety of data compression methods spanning almost 40 years of research, from the work of Shannon, Fano, and Huffman in the late 1940s to a technique developed in 1986. The aim of data compression is to reduce redundancy in stored or communicated data, thus increasing effective data density. Data compression has important application in the areas of file storage and distributed systems. Concepts from information theory as they relate to the goals and evaluation of data ...

Dictionary-based order-preserving string compression

99%

Gennady Antoshenkov

The VLDB Journal — The International Journal on Very Large Data Bases February 1997



As no database exists without indexes, no index implementation exists without order-preserving key compression, in particular, without prefix and tail compression. However, despite the great potentials of making indexes smaller and faster, application of general compression methods to ordered data sets has advanced very little. This paper demonstrates that the fast dictionary-based methods can be applied to order-preserving compression almost with the same freedom as in the general case. The pro ...

### 8 Modeling for text compression

98%

Timothy Bell, Ian H. Witten, John G. Cleary

### ACM Computing Surveys (CSUR) December 1989

Volume 21 Issue 4

The best schemes for text compression use large models to help them predict which characters will come next. The actual next characters are coded with respect to the prediction, resulting in compression of information. Models are best formed adaptively, based on the text seen so far. This paper surveys successful strategies for adaptive modeling that are suitable for use in practical text compression systems. The strategies fall into three main classes: finite-context modeling, i ...

### 9 XML indexing and compression: XPRESS: a queriable compression for XML data

97%

Jun-Ki Min, Myung-Jae Park, Chin-Wan Chung

Proceedings of the 2003 ACM SIGMOD international conference on on Management of data June 2003

Like HTML, many XML documents are resident on native file systems. Since XML data is irregular and verbose, the disk space and the network bandwidth are wasted. To overcome the verbosity problem, the research on compressors for XML data has been conducted. However, some XML compressors do not support querying compressed data, while other XML compressors which support querying compressed data blindly encode tags and data values using predefined encoding methods. Thus, the query performance on com ...

### 10 The performance advantage of applying compression to the memory system

96%

95%

Nihar R. Mahapatra, Jiangjiang Liu, Krishnan Sundaresan

# ACM SIGPLAN Notices , Proceedings of the workshop on Memory system performance ${\sf June~2002}$

Volume 38 Issue 2 supplement

The memory system stores information comprising primarily instructions and data and secondarily address information, such as cache tag fields. It interacts with the processor by supporting related traffic (again comprising addresses, instructions, and data). Continuing exponential growth in processor performance, combined with technology, architecture, and application trends, place enormous demands on the memory system to permit this information storage and exchange at a high-enough performance ...

### 11 Hardware-Assisted Data Compression for Energy Minimization in Systems with Embedded

Processors

L. Benini, D. Bruni, A. Macii, E. Macii

Proceedings of the conference on Design, automation and test in Europe March 2002 In this paper, we suggest hardware-assisted data compressionas a tool for reducing energy consumption of core-based embed-ded systems. We propose a novel and efficient

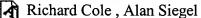




architecture foron-the-fly data compression and decompression whose field of operation is the cache-to-memory path. Uncompressed cachelines are compressed before they are written back to main mem-ory, and decompressed when cache refills take place. We explore two classes of compression methods, profile-driven and differential, since ...

### 12 Optimal VLSI circuits for sorting

95%



Journal of the ACM (JACM) October 1988

Volume 35 Issue 4

This work describes a large number of constructions for sorting N integers in the range [0, M - 1], for N ≤ M ≤ N2, for the standard VLSI bit model. Among other results, we attain: VLSI sorter constructions that are within a constant factor of optimal size, for all M and almost all running times T. a ...

### 13 A very fast algorithm for RAM compression

93%

Luigi Rizzo

### **ACM SIGOPS Operating Systems Review April** 1997

Volume 31 Issue 2

Compressed virtual memory systems have been suggested, and in some cases implemented, to improve the effectiveness of use of physical RAM. However, most proposals and/or implementations are based on adaptive compression algorithms which achieve good compression ratios, but are slow compared to a local disk. Hence, they can only give some advantage with very slow (e.g. network-mounted) swap devices. In this paper we show that in many cases memory pages contain highly compressible data, with a ver ...

### 14 <u>LeZi-update: an information-theoretic framework for personal mobility tracking in PCS</u>

87%

networks

Amiya Bhattacharya, Sajal K. Das

Wireless Networks March 2002

Volume 8 Issue 2/3

The complexity of the mobility tracking problem in a cellular environment has been characterized under an information-theoretic framework. Shannon's entropy measure is identified as a basis for comparing user mobility models. By building and maintaining a dictionary of individual user's *path* updates (as opposed to the widely used location updates), the proposed adaptive on-line algorithm can learn subscribers' profiles. This technique evolves out of the concepts of lossless compression. T ...

### 15 A scheme for data compression in supercomputers

87%

M. A. Bassiouni, N. Ranganathan, A. Mukherjee

Proceedings of the 1988 ACM/IEEE conference on Supercomputing November 1988 There is a growing recognition of the importance of efficient coding and data compression schemes in supercomputing centers and in networks of high-speed computing machines. Recently, there has been a considerable interest in arithmetic coding as a promising technique for reducing the cost of data storage and transmission. In this paper, we present a compression algorithm that is tailored to utilize the enormous speed and memory size of supercomputers and which utilizes an enhanced ...





16 LeZi-update: an information-theoretic approach to track mobile users in PCS networks

87%

Amiya Bhattacharya, Sajal K. Das

Proceedings of the 5th annual ACM/IEEE international conference on Mobile computing and networking August 1999

17 Query evaluation techniques for large databases

83%

Goetz Graefe

**ACM Computing Surveys (CSUR)** June 1993

Volume 25 Issue 2

Database management systems will continue to manage large data volumes. Thus, efficient algorithms for accessing and manipulating large sets and sequences will be required to provide acceptable performance. The advent of object-oriented and extensible database systems will not solve this problem. On the contrary, modern data models exacerbate the problem: In order to manipulate large sets of complex objects as efficiently as today's database systems manipulate simple records, query-processi ...

18 Graded codes by G-sets

82%

J. Peralta, B. Torrecillas

**ACM SIGSAM Bulletin September 1999** 

Volume 33 Issue 3

19 Evolvable hardware chips for industrial applications

82%

Tetsuya Higuchi, Nobuki Kajihara

Communications of the ACM April 1999

Volume 42 Issue 4

20 Optimizing methods: Data compression techniques for economic processing of large

82%

commercial files

James E. Mulford, Richard K. Ridall

Proceedings of the 1971 international ACM SIGIR conference on Information storage and retrieval April 1971

The application of compact coding, differencing and other techniques to indexed sequential files is discussed. The effects on system performance are discussed and reductions of almost 80% in mass storage requirements for a particular file are reported.

Results 1 - 20 of 28

short listing



The ACM Portal is published by the Association for Computing Machinery. Copyright © 2003 ACM, Inc.





> home > about > feedback

> login

US Patent & Trademark Office



Try the *new* Portal design Give us your opinion after using it.

Search Results

Search Results for: [(((compress or compact or encode) < near/2 > data) < paragraph > (field or column or attribution)) and (decompress or decode) and ((compress or encode or compact) < sentence > search) ]

Found 28 of 122,783 searched.

o 1		T 1.	
Search	within	Requit	C

> Advanced Search

> Search Help/Tips

Sort by: <u>Title Publication</u> <u>Publication Date</u> Score <u>Binder</u>

Results 21 - 28 of 28 short listing

Prev Next Page 1 2 Pag

21 <u>Techniques for FPGA implementation of video compression systems</u>

82%

Brian Schoner, John Villasenor, Steve Molloy, Rajeev Jain

Proceedings of the 1995 ACM third international symposium on Field-programmable gate arrays February 1995

Real-time video compression is a challenging subject for FPGA implementation because it typically has a large computational complexity and requires high data throughput. Previous implementations have used parallel banks of FPGAs or DSPs to meet these requirements. Using design techniques that maximize FPGA utilization, we have implemented two video compression systems, each of which uses a single FPGA. In this first system, algorithmic optimizations are made to create a low-complexity imple ...

22 <u>Demonstration session 1: Clear face analysis from MPEG compressed video</u>

80%

Ling-Yu Duan, Qi Tian

Proceedings of the tenth ACM international conference on Multimedia December 2002 In this demonstration, we present a system to analyze the clear degree of faces present in MPEG compressed video of Head-and-Shoulders style. The proposed system consists of three hierarchical modules: low-level features extraction, robust face tracking, and clear faces selection. We have integrated the core algorithm into an Automated Transaction Service (ATS) surveillance system. The Incremental Focus of Attention (IFA) architecture is taken to combine pixel domain processing with compressed d ...





Daniel G. Aliaga, Thomas Funkhouser, Dimah Yanovsky, Ingrid Carlbom Proceedings of the conference on Visualization '02 October 2002

A long-standing research problem in computer graphics is to reproduce the visual experience of walking through a large photorealistic environment interactively. On one hand, traditional geometry-based rendering systems fall short of simulating the visual realism of a complex environment. On the other hand, image-based rendering systems have to date been unable to capture and store a sampled representation of a large environment with complex lighting and visibility effects. In this paper, we prese ...

24 A survey on wavelet applications in data mining

77%

Tao Li, Qi Li, Shenghuo Zhu, Mitsunori Ogihara

**ACM SIGKDD Explorations Newsletter** December 2002

Volume 4 Issue 2

Recently there has been significant development in the use of wavelet methods in various data mining processes. However, there has been written no comprehensive survey available on the topic. The goal of this is paper to fill the void. First, the paper presents a high-level data-mining framework that reduces the overall process into smaller components. Then applications of wavelets for each component are reviewd. The paper concludes by discussing the impact of wavelets on data mining research an ...

25 Sequentially encoded data structures that support bidirectional scanning

77%

Robert J. Lechner

ACM SIGARCH Computer Architecture News, Proceedings of the 2nd annual symposium on Computer architecture December 1974
Volume 3 Issue 4

26 Access methods for text

77%

Chris Faloutsos

ACM Computing Surveys (CSUR) March 1985

Volume 17 Issue 1

This paper compares text retrieval methods intended for office systems. The operational requirements of the office environment are discussed, and retrieval methods from database systems and from information retrieval systems are examined. We classify these methods and examine the most interesting representatives of each class. Attempts to speed up retrieval with special purpose hardware are also presented, and issues such as approximate string matching and compression are discussed. A quali ...

27 Inplace run-length 2d compressed search

77%

Amihood Amir, Gad M. Landau, Dina Sokol

Proceedings of the eleventh annual ACM-SIAM symposium on Discrete algorithms February 2000

28 Software/hardware co-design implementation for fractal image compression

77%

Tai-Chi Lee, Patrick Robinson, Michael Gubody, Erik Henne

Proceedings of the 37th annual Southeast regional conference (CD-ROM) April 1999



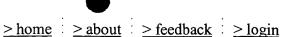
. Results 21 - 28 of 28

short listing

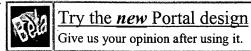


The ACM Portal is published by the Association for Computing Machinery. Copyright © 2003 ACM, Inc.





US Patent & Trademark Office



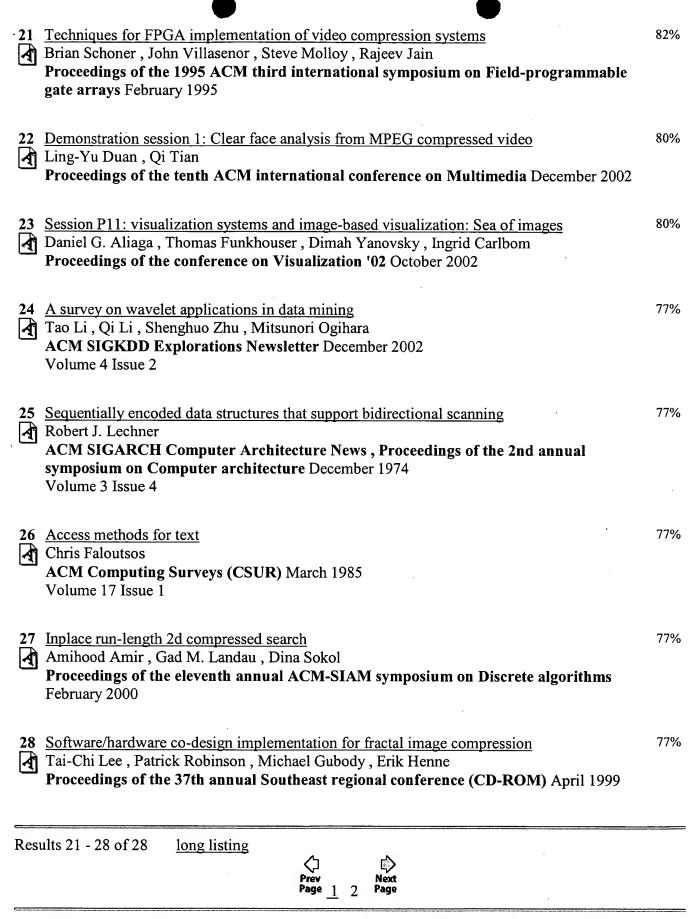
Search Results

Search within Results

Search Results for: [(((compress or compact or encode) < near/2> data) < paragraph> (field or column or attribution)) and (decompress or decode) and ((compress or encode or compact) < sentence> search) ]

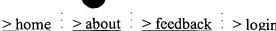
Found 28 of 122,783 searched.

> Search	Help/T	ips			> Advanced Search	
Sort by:	<u>Title</u>	Publication	Publication Date	Score	e <b>№</b> <u>Binder</u>	
Results 2	21 - 28 0	of 28 <u>long</u>	listing Prev		Next Page	

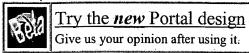


. Inc.





US Patent & Trademark Office



Search Results

Search Results for: [(((compress or compact or encode) < near/2 > data) < paragraph > (field or column or attribution)) and (decompress or decode) and ((compress or encode or compact) < sentence > search) ]

Found 28 of 122,783 searched.

Search within Results			
> Search Help/Tips			
Sort	by: <u>Title Publication Publication Date</u> Score <u>Binder</u>		
Resu	elts 1 - 20 of 28 long listing  Prev Next Page 1 2 Page		
4	Profile-guided code compression Saumya Debray, William Evans ACM SIGPLAN Notices, Proceedings of the ACM SIGPLAN 2002 Conference on Programming language design and implementation May 2002 Volume 37 Issue 5	100%	
4	Query optimization in compressed database systems Zhiyuan Chen, Johannes Gehrke, Flip Korn ACM SIGMOD Record, Proceedings of the 2001 ACM SIGMOD international conference on Management of data May 2001 Volume 30 Issue 2	100%	
4	Tool support for architectural decisions in embedded systems: CoCo: a hardware/software platform for rapid prototyping of code compression technologies Haris Lekatsas, Jörg Henkel, Srimat Chakradhar, Venkata Jakkula, Murugan Sankaradass Proceedings of the 40th conference on Design automation June 2003	100%	

4 Parallel algorithms for data compression

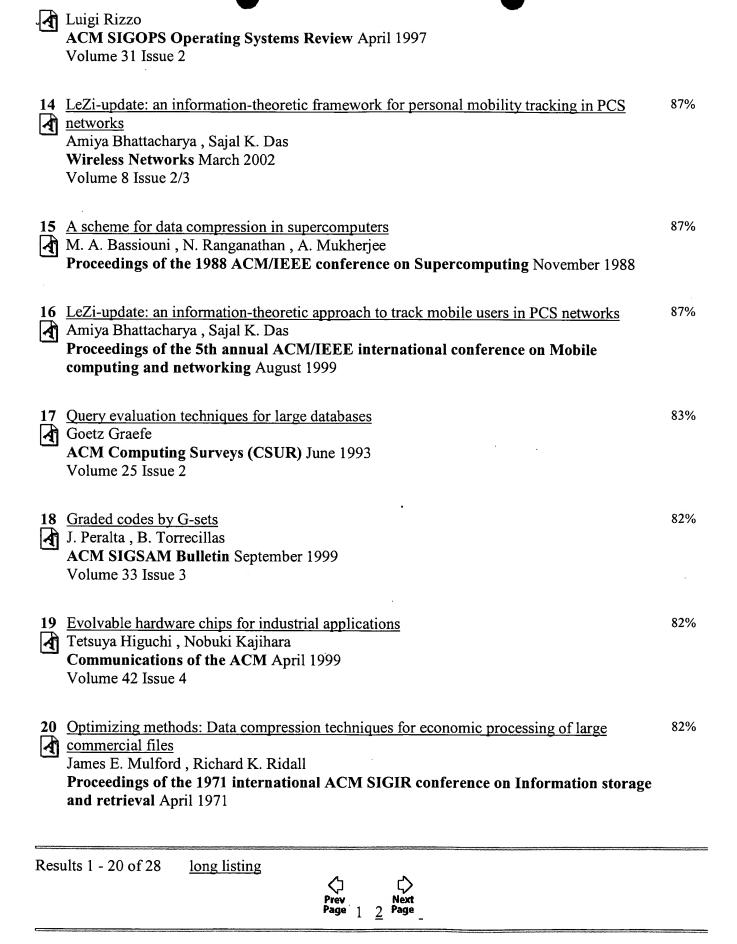
M. E. Gonzalez Smith, J. A. Storer

Journal of the ACM (JACM) April 1985

Volume 32 Issue 2

100%

5 বি	SAMC - efficient semi-adaptive data compression Edward Hatton Proceedings of the 1995 conference of the Centre for Advanced Studies on Collaborative research November 1995	100%
6 বি	<ul> <li><u>Data compression</u></li> <li>Debra A. Lelewer, Daniel S. Hirschberg</li> <li><b>ACM Computing Surveys (CSUR)</b> September 1987</li> <li>Volume 19 Issue 3</li> </ul>	99%
7 1	Dictionary-based order-preserving string compression Gennady Antoshenkov The VLDB Journal — The International Journal on Very Large Data Bases February 1997 Volume 6 Issue 1	99%
8 4	Modeling for text compression Timothy Bell, Ian H. Witten, John G. Cleary ACM Computing Surveys (CSUR) December 1989 Volume 21 Issue 4	98%
9 ••••	XML indexing and compression: XPRESS: a queriable compression for XML data Jun-Ki Min , Myung-Jae Park , Chin-Wan Chung Proceedings of the 2003 ACM SIGMOD international conference on on Management of data June 2003	97%
10 বি	The performance advantage of applying compression to the memory system Nihar R. Mahapatra, Jiangjiang Liu, Krishnan Sundaresan ACM SIGPLAN Notices, Proceedings of the workshop on Memory system performance June 2002 Volume 38 Issue 2 supplement	96%
11 •••	Hardware-Assisted Data Compression for Energy Minimization in Systems with Embedded Processors  L. Benini , D. Bruni , A. Macii , E. Macii  Proceedings of the conference on Design, automation and test in Europe March 2002	95%
12 •	Optimal VLSI circuits for sorting Richard Cole, Alan Siegel  Journal of the ACM (JACM) October 1988  Volume 35 Issue 4	95%
13	A very fast algorithm for RAM compression	93%





The ACM Portal is published by the Association for Computing Machinery. Copyright © 2003 ACM, Inc.



IZEE	Welcome United States Patent and Trademark Of
Help FAQ Terms IE Review	EEE Peer Quick Links: ▼
Welcome to IEEE Xplore®  Home What Can I Access? Log-out  Tables of Contents Journals Magazines Conference Proceedings Search By Author Basic Advanced  Member Services Join IEEE	Your search matched 4 of 983096 documents.  A maximum of 4 results are displayed, 25 to a page, sorted by Relevance in descending order. You may refine your search by editing the current search expression or entering a new one the text by Then click Search Again.  ((compress or encode or compact) <paragraph> search) and ((decompress or decode) Search Again  Results: Journal or Magazine = JNL Conference = CNF Standard = STD  1 A high speed digital data separator design using real time DSP for displications  Kim, B.; Greco, J.D.; Helman, D.N.; Ngo, H.; Yang, H.C.; Wu, WC.S.; Chowdon, R.F.;  Circuits and Systems, 1992. ISCAS '92. Proceedings., 1992 IEEE International Symposium on , Volume: 2 , 3-6 May 1992  Page(s): 625 -628 vol.2</paragraph>
<ul> <li>→ Establish IEEE Web Account</li> <li>→ Access the IEEE Member Digital Library</li> <li>➡ Print Format</li> </ul>	[Abstract] [PDF Full-Text (308 KB)] IEEE CNF  2 Order preserving string compression  Antoshenkov, G.; Lomet, D.; Murray, J.;  Data Engineering, 1996. Proceedings of the Twelfth International Conference of Feb1 March 1996  Page(s): 655-663  [Abstract] [PDF Full-Text (804 KB)] IEEE CNF

3 Practical constructions of L-restricted alphabetic prefix codes

Laber, E.S.; Milidiu, R.L.; Pessoa, A.A.;

String Processing and Information Retrieval Symposium, 1999 and Internation Workshop on Groupware , 22-24 Sept. 1999

Page(s): 115-119

### [Abstract] [PDF Full-Text (92 KB)] IEEE CNF

4 Low-complexity global motion estimation from P-frame motion vecto MPEG-7 applications



Smolic, A.; Hoeynck, M.; Ohm, J.-R.; Image Processing, 2000. Proceedings. 2000 International Conference on , Volu 10-13 Sept. 2000

Page(s): 271 -274 vol.2

### [Abstract] [PDF Full-Text (464 KB)] IEEE CNF

Home | Log-out | Journals | Conference Proceedings | Standards | Search by Author | Basic Search | Advanced Search | Join IEEE | Web Account | New this week | OPAC Linking Information | Your Feedback | Technical Support | Email Alerting | No Robots Please | Release Notes | IEEE Online Publications | Help | FAQ | Terms | Back to Top

Copyright © 2003 IEEE — All rights reserved



SIEEE HOME | SEARCH IEEE | SHOP | WEB ACCOUNT | CONTACT IEEE

	ations/Services Standards Conferences Careers/Jobs
IEEE )	Welcome United States Patent and Trademark O
<u>Heip FAQ Terms IE</u> Review	EE Peer Quick Links ▼
Welcome to IEEE Xplore®	SEARCH RESULTS [PDF Full-Text (804 KB)] PREVIOUS NEXT DOWNLOAD CITA
O- Home O- What Can I Access? O- Log-out	Order preserving string compression
Tables of Contents	Antoshenkov, G. Lomet, D. Murray, J.
O- Journals & Magazines	Digital Equipment Corp., Maynard, MA;  This paper appears in: Data Engineering, 1996. Proceedings of the Twell  International Conference on
Conference Proceedings C- Standards	Meeting Date: 02/26/1996 -03/01/1996 Publication Date: 26 Feb-1 Mar 1996 Location: New Orleans, LA , USA
Search O- By Author	On page(s): 655-663 References Cited: 11 INSPEC Accession Number: 5242668
O- Basic O- Advanced	Abstract: Order-preserving compression can improve sorting and searching performance and honce the performance of database eventure. We describe
Member Services  - Join IEEE	and hence the performance of database systems. We describe a new parsing (tokenization) technique that can be applied to variable-length " keys", producing substantial compression. It can both compredescripts described by the ford distinguishing variable lengths for distinguishing the ford distinguished to the ford distinguished the ford distin
O- Establish IEEE Web Account	decompress data, permitting variable lengths for dictionary entries and compressed forms. The key notion is to partition the space of strings into ran encoding the common prefix of each range. We illustrate our method with pa
O- Access the IEEE Member Digital Library	character compression for multi-field keys, demonstrating the dramatic gains possible. A specific version of the method has been implemented in Digital's relational database system to enable effective multi-field compression
Print Format	
	Index Terms:  data compression encoding relational databases sorting Digital Rdb relational databases system compressed forms data decompression database systems performance must compression multi-field keys order-preserving string compression padding character compression parsing technique range common prefix encoding searching performant sorting performance string-space partitioning tokenization technique variable-length dictionary entries variable-length keys
	Documents that cite this document Select link to view other documents in the database that cite this one.

SEARCH RESULTS [PDF Full-Text (804 KB)] PREVIOUS NEXT DOWNLOAD CITATION

Copyright © 2003 IEEE — All rights reserved



> home : > about : > feedback : > logout US Patent & Trademark Office

Citation

### **ACM Transactions on Information Systems (TOIS)**

>archive

Volume 15, Issue 2 (April 1997) >toc

### Making a digital library: the contents of the CORE project

#### **Authors**

Richard Entlich Cornell Univ., Ithaca, NY
Jan Olsen Cornell Univ., Ithaca, NY
Lorrin Garson American Chemical Society
Michael Lesk Bellcore
Lorraine Normore Chemical Abstracts Service
Stuart Weibel OCLC, Dublin, OH

#### Publisher

ACM Press New York, NY, USA

Pages: 103 - 123 Periodical-Issue-Article

Year of Publication: 1997

ISSN:1046-8188

http://doi.acm.org/10.1145/248625.248627 (Use this link to Bookmark this page)

> full text > abstract > references > citings > index terms

> review > peer to peer

> Review this Article

Save to Binder

> BibTex Format

↑ FULL TEXT: See Access Rules

🗖 pdf 1.50 MB

#### ♠ ABSTRACT

The CORE (Chemical Online Retrieval Experiment) project is a library of primary journal articles in chemistry. Any library has an inside and an outside; in this article we describe the inside of the library and the methods for building the system and accumulating the database. A later





article will describe the outside (user experiences). Among electronic-library projects, the CORE project is unusual in that it has both ASCII derived from typesetting and image data for all its pages, and among experimental electronic-library projects, it is unusually large. We describe here (a) the processes of scanning and analyzing about 400,000 pages of primary journal material, (b) the conversion of a similar amount of textual database material, (c) the linking of these two data sources, and (d) the indexing of the text material.

### ↑ REFERENCES

Note: OCR errors may be found in this Reference List extracted from the full text article. ACM has opted to expose the complete List rather than only correct and linked references.

- 1 AAP. 1987. Standard for electronic manuscript preparation and markup. Version 2.0. Assoc. of American Publishers, New York.
- 2 BAIRD, H.S. 1987. The skew angle of printed documents. In Proceedings of the SPSE 40th Conference on Hybrid Imaging Systems. Society of Photographic Scientists and Engineers, Rochester, N.Y., 21-24.
- 3 BIRMINGHAM, W. P., DRABENSTOTT, K. M., FROST, C. O., WARNER, A. J., AND WILLIS, K. 1994. The University of Michigan Digital Library: This is not your father's library. In Digital Libraries '94 Proceedings. Texas A & M Univ., College Station, Tex., 53-60.
- 4 James H. Coombs, Allen H. Renear, Steven J. DeRose, Markup systems and the future of scholarly text processing, Communications of the ACM, v.30 n.11, p.933-947, Nov. 1987
- 5 Dennis E. Egan , Michael E. Lesk , R. Daniel Ketchum , Carol C. Lochbaum , Joel R. Remde , Michael Littman , Thomas K. Landauer, Hypertext for the electronic library?: CORE sample results, Proceedings of the third annual ACM conference on Hypertext, p.299-312, December 15-18, 1991, San Antonio, Texas, United States
- 6 Dennis E. Egan , Joel R. Remde , Thomas K. Landauer , Carol C. Lochbaum , L. M. Gomez, Behavioral evaluation and analysis of a hypertext browser, ACM SIGCHI Bulletin, v.20 n.SI, p.205-210
- 7 FERGUSON, E. 1992. Engineering and the Mind's Eye, MIT Press, Cambridge, Mass.
- 8 FLETCHER, L. A. AND KASTURI, R. 1987. Segmentation of binary images into text strings and graphics. In Proceedings of SPIE Conference on Applications of Artificial Intelligence V. Vol. 786. SPIE, Bellingham, Wash., 533-540.
- 9 Melia M. Hoffman , Lawrence O'Gorman , Guy A. Story , James Q. Arnold , Nina H. Macdonald, The RightPages services: an image-based electronic library, Journal of the American Society for Information Science, v.44 n.8, p.446-452, Sept. 1993
- 10 KIBBEY, M. AND EVANS, N.H. 1989. The network is the library. EDUCOM Rev. 24, 3, 15-20.
- 11~ KIRSTEIN, P. AND MONTASSER-KOHSARI, C. 1995. The C-ODA project: Experiences and tools. Comput. J. 38, 8, 670-680.
- 12 KLING, R. AND ELLIOT, M. 1994. Digital library design for organizational usability. In Digital Libraries '94 Proceedings. 146-155.
- 13 LOVE, R.A. 1986. Chemical Journals Online (CJO)--The new full-text database through STN International. In Proceedings Online '86. Online, Inc., Weston, Conn., 149-151.
- 14 LYNCH, C.A. 1989. From telecommunications to networking: The MELVYL online union catalog and the development of intercampus networks at the University of California. Libr. Hi

Tech 7, 2, 61-83.

- 15 MCKNIGHT, C. 1993. Electronic journals--Past, present.., and future? ASLIB Proc. 45, 7-10.
- 16 MIKSA, F. L. AND DOTY, P. 1994. Intellectual realities and the digital library. In Digital Libraries '94 Proceedings. 1-5.
- 17 John K. Ousterhout, Tcl and the Tk toolkit, Addison-Wesley Longman Publishing Co., Inc., Boston, MA, 1994
- 18 SCHATZ, B., BISHOP, A., MISCHO, W., AND HARDIN, J. 1994. Digital library infrastructure for a university engineering community. In Digital Libraries '94 Proceedings. 21-24.
- 19 SRIHARI, S. N., LAM, S. W., HULL, J. J., SRIHARI, R. K., AND GOVINDARAJU, V. 1994. Intelligent data retrieval from raster images of documents. In Digital Libraries '94 Proceedings. 34-40.
- 20 STERN, B.T. 1990. ADONIS--A vision of the future. In Interlending and Document Supply, G. P. Cornish, and A. Gallico, Eds. British Library, 23-33.
- 21 Dacheng Wang, Sargur N. Srihari, Classification of newspaper image blocks using texture analysis, Computer Vision, Graphics, and Image Processing, v.47 n.3, p.327-352, Sept. 1989

#### ↑ CITINGS 2

Gene Golovchinsky, Morgan N. Price, Bill N. Schilit, From reading to retrieval: freeform ink annotations as queries, Proceedings of the 22nd annual international ACM SIGIR conference on Research and development in information retrieval, p.19-25, August 15-19, 1999, Berkeley, California, United States

Bill N. Schilit, Morgan N. Price, Gene Golovchinsky, Digital library information appliances, Proceedings of the third ACM conference on Digital libraries, p.217-226, June 23-26, 1998, Pittsburgh, Pennsylvania, United States

#### ♠ INDEX TERMS

#### **Primary Classification:**

H. Information Systems

4 H.3 INFORMATION STORAGE AND RETRIEVAL

H.3.6 Library Automation

Subjects: Large text archives

#### **Additional Classification:**

H. Information Systems

+ H.3 INFORMATION STORAGE AND RETRIEVAL

C+ H.5 INFORMATION INTERFACES AND PRESENTATION (I.7)

4.5.2 User Interfaces (D.2.2, H.1.2, I.3.6)

Subjects: Interaction styles (e.g., commands, menus, forms, direct manipulation)

I. Computing Methodologies

4 I.4 IMAGE PROCESSING AND COMPUTER VISION

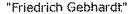
#### General Terms:

Algorithms, Design, Experimentation, Human Factors

### Keywords:

image segmentation

### ↑ REVIEW



The goal of CORE is to study the problems of text retrieval with huge amounts of data (many gigabytes) including pictures. The data include several years of 20 journals published by the American Chemical Society (ACS). The text is available in the internal format used by the ACS; the pictures (almost entirely graphs) have to be identified in the printed journals or on films, scanned, and assigned to the proper places within the text. The paper explains the tasks of figure extraction and text acquisition in sufficient detail, giving examples. In addition, the SCEPTER user interface and the Newton search engine are sketched, again with illustrations. Online Computing Reviews Service

### Peer to Peer - Readers of this Article have also read:

The knowledge complexity of interactive proof-systems

# Proceedings of the seventeenth annual ACM symposium on Theory of computing

S Goldwasser, S Micali, C Rackoff

New Products

**Linux Journal** 1996, 27es CORPORATE Linux Journal Staff

Book Review: IPv6: The New Internet Protocol

**Linux Journal** 1996, 25es CORPORATE Linux Journal Staff

Programming languages for distributed computing systems

**ACM Computing Surveys (CSUR)** 21, 3

Henri E. Bal , Jennifer G. Steiner , Andrew S. Tanenbaum

Book Review: Civilizing Cyberspace

**Linux Journal** 1996, 28es CORPORATE Linux Journal Staff

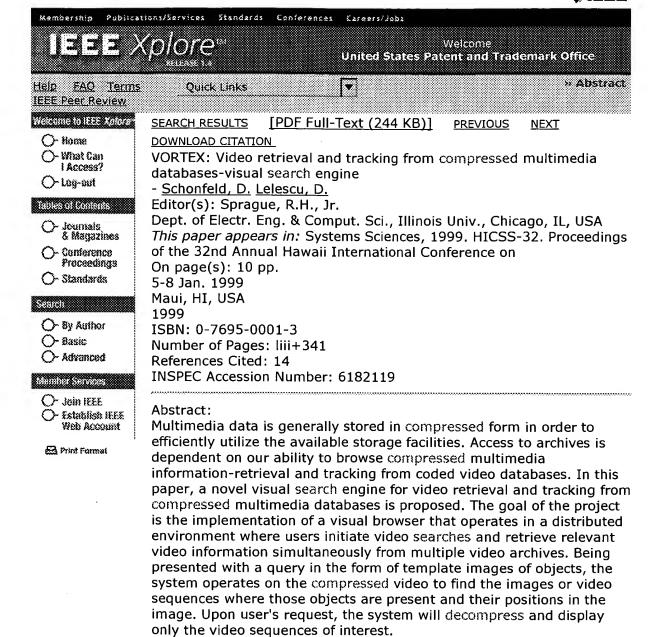
The ACM Portal is published by the Association for Computing Machinery. Copyright © 2002 ACM, Inc.



ieee home : search ieee | shop | web account | contact ieee







### Index Terms:

video databases multimedia databases data compression video coding image retrieval search engines VORTEX video retrieval and tracking compressed multimedia visual search engine multimedia databases coded video databases video retrieval visual browser

### **Documents that cite this document**

Select link to view other documents in the database that cite this one.

SEARCH RESULTS [PDF Full-Text (244 KB)] **PREVIOUS** NEXT DOWNLOAD CITATION





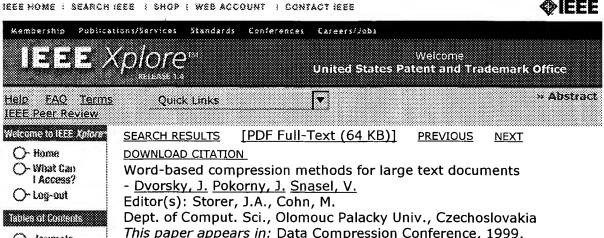
# Advanced Search Join IEEE | Web Account | New this week | OPAC Linking Information | Your Feedback | Technical Support | Email Alerting No Robots Please | Release Notes | IEEE Online Publications | Help | FAQ | Terms | Back to Top

Copyright © 2002 IEEE — All rights reserved









Proceedings, DCC '99 On page(s): 523 29-31 March 1999 Snowbird, UT, USA 1999

ISBN: 0-7695-0096-X

IEEE Catalog Number: PR00096

Number of Pages: xv+566 References Cited: 3

INSPEC Accession Number: 6314316

O- Advanced Member Services

O- Journals & Magazines

O- Conference

O- Standards

O- By Author

Or Basic

Search

Proceedings

Or Join IEEE Cr Establish IEEE Web Account

Print Format

#### Abstract:

Summary form only given. We present a new compression method, called WLZW, which is a word-based modification of classic LZW. The algorithm is two-phase, it uses only one table for words and non-words (so called tokens), and a single data structure for the lexicon is usable as a text index. The length of words and non-words is restricted. This feature improves the compress ratio achieved. Tokens of unlimited length alternate, when they are read from the input stream. Because of restricted length of tokens alternating of tokens is corrupted, because some tokens are divided into several parts of same type. To save alternating of tokens two special tokens are created. They are empty word and empty non-word. They contain no character. Empty word is inserted between two non-words and empty non-word between two words. Alternating of tokens is saved for all sequences of tokens. The alternating of tokens is an important piece of information. With this knowledge the kind of the next token can be predicted. One selected (so-called victim) non-word can be deleted from input stream. An algorithm to search the victim is also presented. In the decompression phase, a deleted victim is recognized as an error in alternating of words and non-words in sequence. The algorithm was tested on many texts in different formats (ASCII, RTF). The Canterbury corpus, a large set, was used as a standard for publication results. The compression ratio achieved is fairly good, on average 25%-22%. Decompression is very fast. Moreover, the algorithm enables evaluation of database queries in given text. This supports the idea of leaving data in the compressed state as long as possible, and to decompress it when it is necessary.

### **Index Terms:**

data compression text analysis query processing data structures sequences word-based compression large text documents WLZW two-phase algorithm data structure lexicon text index token length empty word empty non-word sequences search algorithm ASCII RTF





### **Documents that cite this document**

Select link to view other documents in the database that cite this one.

SEARCH RESULTS [PDF Full-Text (64 KB)] PREVIOUS NEXT DOWNLOAD CITATION

Home | Log-out | Journals | Conference Proceedings | Standards | Search by Author | Basic Search |
Advanced Search

Join IEEE | Web Account | New this week | OPAC Linking Information | Your Feedback | Technical
Support | Email Alerting

No Robots Please | Release Notes | IEEE Online Publications | Help | FAQ | Terms | Back to Top

Copyright © 2002 IEEE — All rights reserved